

REMARKS

Applicants thank the Examiner for a thorough consideration of the pending application. Claims 1-21 and 23-55 are presently pending in the application. Claims 8, 19, 20, 27, 29 and 31-36 have been amended, Claim 22 has been cancelled, and Claims 44-55 have been added by this paper. Applicants respectfully request reconsideration and withdrawal of the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-3, 5, 10, 15-17, 19, 22, 23, 25, 26, 29, 31, 35 and 38-43 stand rejected under 35 U.S.C. § 102(e) as being anticipated by DeLorme et al. (U.S. Pat. No. 6,321,158). This rejection is respectfully traversed.

Claims 1, 19, 29 and 35 are independent claims from which the remaining rejected claims respectively depend. Each of the independent claims, however, define over DeLorme et al. (6,321,158) because DeLorme et al. does not teach each and every element of Applicants' claimed invention.

First, the Examiner admits that DeLorme et al. does not disclose vehicle preference settings when making the §103 rejection. See Office Action mailed 7-21-03 at Page 4. Because DeLorme et al. does not teach each and every element of Applicants' independent claims, it is not properly §102 prior art. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

Second, DeLorme et al. fails to disclose a data controller in communication with the microcontroller of the vehicle electronic control unit and in a PDA for transmitting

user preference data from the PDA to the data controller. DeLorme et al. fails to suggest transmitting any data from the PDA to a data controller, let alone user preference data. Accordingly, DeLorme et al. does not anticipate independent Claims 1, 19, 29 and 35. Further, because the independent claims are not disclosed by DeLorme et al., the claims depending therefrom are similarly not taught. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

The Examiner asserts that DeLorme discloses the PDA transmitting user preference data to a data controller by infrared transmission in Figure 1A1, and further that DeLorme discloses transmitting the user preference data to the data controller by infrared transmission in Figure 1A3. Applicants point out that the Examiner has not shown the limitation of a data controller in communication with the microcontroller of the electronic control unit in a vehicle, wherein the microcontroller controls accessory devices according to the user preference data. Accordingly, the figures cited by the Examiner for support of this DeLorme disclosure fail to disclose Applicants' claimed invention. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

The Examiner relies on DeLorme for the disclosure of the use of the internet in Col. 7, ln. 4 and Col. 8, ln. 26. In each citation by the Examiner, reference is made to an IRMIS database access via the internet. The Col. 8 citation further explains that the database (internet) is accessed by a desktop computer, but may alternatively be accessed via the internet. DeLorme, however, does not teach the user preference settings input to the PDA, the PDA executing code in the PDA memory that converts the user preference settings to the user preference data transmitted from the PDA to the

electronic control unit, wherein the PDA is able to connect to a network for a receiving code to be executed when converting the user preference settings to the user preference data and wherein the network is the internet. Further, DeLorme does not disclose a processor executing code in its memory to convert the user preference settings to the user preference data transmitted from the data controller to the electronic control unit, wherein the code executed by the processor is written to the memory when received from an internet website. Accordingly, reconsideration and withdrawal of the rejections is respectfully requested.

"ADAPTED To"

In examining the claims, the Examiner has held that an element "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. "It does not constitute a limitation in any patentable sense," according to the Examiner, who cites *In re Hutchison*, 69 USPQ 138. See Office Action mailed 7-21-2003 at Page 3.

The Examiner, however, is incorrect. Applicants kindly direct the Examiner to *In re Swinehart and Sfiligoj*, 169 USPQ 226 (CCPA 1971) (copy enclosed). The Court of Customs and Patent Appeals in *In re Swinehart* held that "functional" claims indicate nothing more than the fact that attempt is being made to define something by what it does rather than by what it is and then there is nothing intrinsically wrong with the use of such technique in drafting patent claims. The Court further stated that "any concern over the use of functional language at so-called 'point of novelty' . . . is not only

irrelevant, it is misplaced." *Id.* at 228, 229. Applicants note that the *In re Swinehart and Sfiligoj* decision supersedes *In re Hutchison*.

Applicants also direct the Examiner's attention to the Court of Customs and Patent Appeals decision in *In re Venezia*, 189 USPQ 149 (CCPA 1976) (copy enclosed), in which the Court, in addressing the use of "adapted to" language in a claim held that "[w]e see nothing wrong in defining the structures of the components of the completed connector assembly in terms of the interrelationship of the components, or the attributes they must possess, in the completed assembly." The Court found nothing indefinite in the claims and further stated, "[o]ne skilled in the art would have no difficulty determining whether or not a particular collection of components infringed the collection of the interrelated components defined by these claims." *Id.* at 152. Note also that *In re Venezia* similarly supersedes *In re Hutchison*.

Therefore, Applicants submit that the Examiner's failure to treat the adapted to limitation in a patentable sense is improper. Applicants submit that the adapted to claim language better define the attributes of the claimed structure.

REJECTION UNDER 35 U.S.C. § 103

Claims 6, 18, 20, 27, 30, 32, 33, 34 and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DeLorme et al. (U.S. Pat. No. 6,321,158). Applicants respectfully traverse this rejection.

The rejected claims are dependent on the independent claims addressed above and similarly define over the DeLorme et al. reference cited by the Examiner. For each of the cited claims, the Examiner has stated that it would be obvious to one of ordinary

skill in the art to provide the claimed feature. Applicants disagree and ask the Examiner to provide analogous prior art supporting the stated position.

Claims 4, 7, 21, 24 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DeLorme et al. (U.S. Pat. No. 6,321,158) in view of Berry (U.S. Pat. No. 6,559,773). This rejection is respectfully traversed.

The rejected claims depend from independent claims that have been addressed above and similarly define over the DeLorme reference. The Examiner has cited DeLorme et al. in combination with Berry (6,559,773). Berry, however, fails to cure the deficiency cited above with respect to DeLorme et al.

Foremost, the Examiner admits that DeLorme does discuss settings for vehicle accessory devices. This supports Applicants' arguments above that DeLorme et al. fails to teach each and every element of Applicants' claimed invention, as the claimed invention requires user preference settings for vehicle accessory devices. The Examiner, however, states that Berry teaches such settings for vehicle accessory devices. Applicants point out, however, that the Examiner's reliance on Berry is misplaced, as Berry discloses control of electronic accessories with a human machine interface controller, but does not disclose transmitting user preference data from a PDA to a data controller, which transmits the user preference to the electronic control unit, wherein the microcontroller controls the accessory devices according to the user preference data. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

ALLOWABLE SUBJECT MATTER

The Examiner states that Claims 8, 9 and 11-14 would be allowable if rewritten in independent form. Presently, Applicants have amended Claim 8 to include the limitations of the base claim. With respect to the remaining claims, Applicants have forgone rewriting the claims in view of the arguments above.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

By: 
W. R. Duke Taylor
Reg. No. 31,606

Dated: October 21, 2003

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

MM:ca

ation⁵⁸ reveal that in 1968, single and double wall accounted for over 99% of the sales of corrugated board. (Tr. 583) Even including estimates of Tri-Wall's output, of a total of 180 billion square feet of corrugated paper board produced by the industry (Tr. 609), significantly less than 1%, some 450 million square feet,⁵⁹ was triple wall board. (Tr. 588-9)

At best, Tri-Wall can be credited with being the first to produce a stronger corrugated board container by adding a third line of single face sheet to the conventional corrugation line. As we see it, this does not constitute a patentable development. *Preuss v. General Electric Co.*, 392 F.2d 29, 157 USPQ 177 (2d Cir. 1968), especially where, as here, the alleged invention involves a combination of elements and devices common in the prior art with the resulting danger of removing extrant knowledge from the public domain. *Continental Can Co. v. Old Dominion Box Co.*, 393 F.2d 321, 157 USPQ 353 (2d Cir. 1968).

Conclusion

Based on the total trial record before us, we find in contemplation of law that:

1. the patent in suit teaches the "two step" method of manufacture;
2. the plaintiff is not barred by collateral estoppel from prosecuting the pending claims;
3. the handmade unimpregnated board constituted a nonexperimental prior public use, invalidating the patent in suit pursuant to 35 U.S.C. § 102;
4. the patent in suit, "obvious at the time the invention was made," is invalid pursuant to 35 U.S.C. § 103. Therefore, we are constrained and do find the Tri-Wall patent, 3,093,224 invalid.

The Clerk of this Court is directed to enter judgment in favor of defendant Continental Can Co., Inc.

⁵⁸ These figures do not reflect Tri-Wall production because plaintiff does not report to the association.

⁵⁹ Wiines Goetsch estimated that of 586 converting plants (operating corrugation lines) 20 manufacture triple wall board, and only 4-5 run three wall at least once a week. Query, how much business has the patent's revelations brought Goetsch's employer?

4. Claims — Functional — In general (§20.451)

There is no support, in holdings of prior cases or in statute, for proposition that "functional" language, in and of itself, renders claim improper; moreover, there is no court decision holding that there is some other ground for objecting to claim on basis of any language, "functional" or otherwise,

Court of Customs and Patent Appeals

In re SWINCHART AND Sfiligoi

No. 8396 Decided Apr. 1, 1971

PATENTS

1. Claims — Functional — In general (§20.451)

"Functional" indicates nothing more than fact that attempt is being made to define something by what it does rather than by what it is; there is nothing intrinsically wrong with use of such technique in drafting patent claims.

2. Claims — Functional — In general (§20.451)

Court sees no merit in any proposition which would require denial of claim solely because of type of language used to define subject matter for which patent protection is sought.

3. Claims — Functional — In general (§20.451)

Patentability — Subject matter for patent monopoly — Function (§51.503)

Concern over use of functional language at "point of novelty" stems largely from fear that applicant will attempt to distinguish over reference by emphasizing property or function not mentioned in reference and thereby assert that his claimed subject matter is novel; such a concern is irrelevant and misplaced; mere recitation of newly discovered function or property, inherently possessed by things in prior art, does not cause claim drawn to those things to distinguish over prior art; additionally, where Patent Office has reason to believe that functional limitation asserted to be critical for establishing novelty in claimed subject matter, in fact, be an inherent characteristic of prior art, it possesses authority to require applicant to prove that subject matter shown to be in prior art does not possess characteristic relied on.

4. Claims — Functional — In general (§20.451)

There is no support, in holdings of prior cases or in statute, for proposition that "functional" language, in and of itself, renders claim improper; moreover, there is no court decision holding that there is some other ground for objecting to claim on basis of any language, "functional" or otherwise,

beyond what is already sanctioned by U.S.C. 112.

5. Claims — Broad or narrow — In general (§20.201)

Assuming that applicant is claiming what he regards as his invention, there are in reality only two basic grounds for rejecting claim under 35 U.S.C. 112; first is that language used is not precise and definite enough to provide clear-cut indication of scope of subject matter embraced by claim; this ground finds its basis in second paragraph of section 112; second is that language is so broad that it causes claim to have a potential scope of protection beyond that which is justified by specification disclosure; this ground stems from first paragraph of section 112; merits of "functional" language in claim must be tested in light of these two requirements alone.

6. Claims — Functional — In general (§20.451)

"Functional" terminology may render claim quite broad; by its own literal terms, claim employing such language covers any and all embodiments which perform recited function; legitimate concern often exists as to whether scope of protection defined thereby is warranted by scope of enablement indicated and provided by description contained in specification; this is not to say, however, that every claim containing "functional" terminology is broad, since, in many cases, it is obvious that only a very limited group of objects will fall within intended category.

Particular patents—Crystalline Materials

Appeal from Board of Appeals of the Patent Office.

Application for patent of Carl F. Swinchart and Marko Sfiligoi, Serial No. 314,952, filed Oct. 9, 1963; Patent Office Group 165. From decision rejecting claim 24, applicants appealed. Reversed; Lane, Judge, concurring with opinion; Almond, Judge, dissenting with opinion.

JOHN P. HAZZARD and JAMES A. LUCAS, Cleveland, Ohio, for appellant.

Patent Office Board of Appeals — In general (§20.551)

This appeal is from the decision of the Patent Office Board of Appeals, adhered to on reconsideration, which affirmed the rejection of claim 24 in appellants' application as failing to meet the requirements of 35 U.S.C. 112. The board reversed the rejection of two other claims.

The Invention

The subject matter of the appealed claim is a composition of matter essentially made up of barium fluoride and calcium fluoride in approximately eutectic proportions. The record indicates, and appellants confirm, that "eutectic compositions of barium fluoride and calcium fluoride are well known in the prior art." However, appellants are apparently the first to discover that when crystalline forms of these two components are melted together in eutectic proportion and then resolidified by "conventional crystal-growing techniques," there results a multi-phase crystalline body characterized by an intimate matrix of large, visible crystals, which, unlike the prior art materials, does not cleave, is resistant to thermal shock and impact and approaches maximum density for the overall composition. In addition, and allegedly unexpectedly, these crystalline bodies "are capable of transmitting collimated light," especially in the infrared wave range.

The appealed claim recites:

24. A new composition of matter, transparent to infrared rays and resistant to thermal shock, the same being a solidified melt of two components present in proportion approximately eutectic, one of said components being BaF₂ and the other being CaF₂.

According to their brief, "[t]he exact point of novelty between appellants' claimed composition and that of the prior art is transparency."¹

¹ Serial No. 314,952, filed October 9, 1963, for "Crystalline Materials."

² We observe that the term "transparent", as indicated by its primary dictionary definition of "having the property of transmitting light without appreciable scattering, so that bodies lying beyond are entirely visible," generally is taken to refer to those light waves which are visible to the human eye. The parties here seem to agree that in the

The Grounds for Rejection
The examiner rejected claim 24 "for failing to particularly point out and distinctly claim the invention as required in 35 U.S.C. 112." His asserted reasons were as follows:

Claim 24 is functional and fails to properly point out the invention. Applicants point out on page 2 of the specification, lines 24-27 that when the components are merely fused and cast as an integral body, said body is opaque. This claim in receiving "transparent to infrared rays" is thus improperly functional. * * * It should also be noted that this claim does not require more than one phase.

The board agreed, adding:

Claim 24 stands rejected as improperly functional in that it distinguishes over the unsatisfactory material of appellants figure 3 merely in the functional term "transparent to infrared rays." We agree with the examiner in this respect, as transparency of the claimed material cannot be treated as an inherent characteristic property, in view of the fact that the composition of appellants' Example V (figure 3) lacks this property. Yet it is made of the same materials as appellants' Example I. * * * This claim is not the type covered by a proper functional limitation pursuant to 35 U.S.C. 112, since the language in question does not define a means or a step, or a distinguishing ingredient.

Opinion

It is fairly safe to conclude from the language quoted above that the examiner and the board considered the use of functional language, per se, to render the instant claim indefinite. Appellants have apparently conceded that "functional" is ordinarily equated with indefiniteness. They argue strenuously, however, that the disputed language here does not necessarily refer to a function of the recited composition or to a desired result but rather it defines a physical property. On the record produced in the Patent Office, therefore, it would appear that the single issue before us is whether the disputed language is in fact "functional". If this issue were determinative, appellants would fail since we have no doubt that such

¹We think our views herein are in accord with those of Congress as indicated by the language of the third paragraph of 35 U.S.C. 112. Note also the discussion and authorities cited on this point in In re Fuerther, 50 CCPA 1453, 319 F.2d 138, USPQ 217 (1963).

[2] The solicitor, it appears, would also treat the question of *what* is being defined as important. He distinguishes a case relied on by appellants as "irrelevant" since the functional term here peripherally dealt with novel proportions in a composition whereas here the question is "whether novelty in structure can be precisely defined in wholly functional terms." Nevertheless, we are unable to see merit in any proposition which would require the denial of a claim *solely* because of the type of language used to define the subject matter for which patent protection is sought. Insular as the opinion in *In re Fisher*, 50 CCPA 1025, 307 F.2d 948, 135 USPQ 22 (1962), cited and relied on by the Patent Office here is inconsistent with the above statement, it will no longer be followed. Any doubt whether claims containing language such as that used in the *In re Fisher* case would be patentable was laid to rest last term when this court reversed the Patent Office position when the *Fisher* application came before us for a second time. See *In re Fisher*, 57 CCPA 1099, 427 F.2d 833, 166 USPQ 18 (1970).

²Compare the following language quoted from the opinion in *Locklin v. Switzer Bros., Inc.*, 125 USPQ 515, 519 (N.D. Cal., 1959), aff'd 299 F.2d 160, 131 USPQ 294 (9th Cir. 1961):

Plaintiffs cite a multitude of cases in support of the argument that this functional expression invalidates the claims. But, none of these cases holds that claims employing functional expressions to define the claimed invention are per se invalid. In all of the cases relied upon by Plaintiff in *In re Fisher*, 50 CCPA 1025, 307 F.2d 948, 135 USPQ 22 (1962), cited and relied on by the Patent Office here is inconsistent with the above statement, it will no longer be followed. Any doubt whether claims containing language such as that used in the *In re Fisher* case would be patentable was laid to rest last term when this court reversed the Patent Office position when the *Fisher* application came before us for a second time. See *In re Fisher*, 57 CCPA 1099, 427 F.2d 833, 166 USPQ 18 (1970).

language is "functional" at least insofar as we interpret the meaning of that term. In any event, for reasons which will become clear as this opinion progresses, we find that issue to be not only *not* determinative of whether claim 24 satisfies the requirements of 35 U.S.C. 112 but also irrelevant in the analysis leading up to that determination.

[1] We take the characterization "functional", as used by the Patent Office and argued by the parties, to indicate nothing more than the fact that an attempt is being made to define something (in this case, a composition) by what it *does* rather than by what it *is* (as evidenced by specific structure or material, for example). In our view, there is nothing intrinsically wrong with the use of such a technique in drafting patent claims.³ Indeed we have even recognized in the past the practical necessity for the use of functional language. See, for example, *In re Halleck*, 57 CCPA 954, 421 F.2d 911, 164 USPQ 647 (1970). We recognize that prior cases have hinted at a possible distinction in this area depending on the criticality of the particular point at which such language might appear.⁴

[3] However, that any concern over the use of functional language at the so-called "point of novelty" systems largely from the fear that an applicant will attempt to distinguish over a reference disclosure by emphasizing a property or function which may not be mentioned by the reference and thereby assert that his claimed subject matter is novel. Such a concern is not only irrelevant; it is misplaced. In the first place, it is elementary that the mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. Additionally, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

[4] We are convinced that there is no support, either in the actual holdings of prior cases or in the statute, for the proposition, put forward here, that "functional" language, in and of itself, renders a claim improper. We have also found no prior decision of this or any other court which may be said to hold that there is some other ground for objecting to a claim on the basis of *any* language, "functional" or otherwise, beyond what is already sanctioned by the provisions of 35 U.S.C. 112.⁵

[5] Assuming that an applicant is claiming what he regards as his invention, there are in reality only two basic grounds for rejecting a claim under § 112. The first is that the language used is not precise and definite enough to provide a clear-cut indication of the scope of subject matter embraced by the claim. This ground finds its basis in the second paragraph of section 112, the rationale for which was discussed by us recently in *In re Halleck*, 57 CCPA 1225, 127 F.2d 1378, 166 USPQ 204 (1970). The second is that the language is so broad that it causes the claim to have a potential scope of protection beyond that which is justified by the specification and disclosure. Cf. *General Electric Co. v. Washburn Appliance Corp.*, 304 U.S. 364, 37 USPQ 466 (1938). This ground of rejection is now recognized as stemming from the

requirements of the first paragraph of 35 U.S.C. 112. See *In re Robins*, 57 CCPA 1321, 429 F.2d 452, 166 USPQ 552 (1970); *In re Borkowski*, 57 CCPA 946, 422 F.2d 904, 164 USPQ 642 (1970). Cf. *In re Halleck*, supra. The merits of the "functional" language in the claim before us must be tested in the light of these two requirements alone.

[6] "Functional" terminology may render a claim quite broad. By its own literal terms a claim employing such language covers any and *all* embodiments which perform the recited function. Legitimate concern often properly exists, therefore, as to whether the scope of protection defined thereby is warranted by the scope of enablement indicated in the specification. This is not to say, however, that every claim containing "functional" terminology is broad. Indeed, in many cases it will be obvious that only a very limited group of objects will fall within the intended category. Such appears to be the case here, since we do not sense any concern by the Patent Office that appellants are claiming more than they are entitled to claim under the first paragraph of section 112. We need not, therefore, consider whether there are any problems with the appealed claim arising under that paragraph. It is clear that the arguments of the parties are concerned solely with whether the disputed language serves to define the subject matter for which protection is sought with the distinctness and particularity which are required by the second paragraph of section 112.

In the brief for the Patent Office, it has been asserted for the first time that the limits of appellant's invention clearly are not fixed by the expression "transparent to infrared rays." The expression is not defined, and in fact does not appear, in appellant's written description of their invention.

The solicitor points out that, in their specification, appellants demonstrate the novel aspect of their invention by setting out three charts depicting the percentage (as a function of wavelength) of infrared radiation transmitted through a 5mm thick "window" made from a eutectic composition of the components recited in the claim. One chart indicates that a fused and cast mixture of the two components transmits "substantially zero" collimated light in the infrared range. The other two charts indicate that when the fused mixture is "grown to form a crystal ingot," the windows made therefrom transmit up to approximately 80% of infrared radiation depending on the particular wavelength of the

radiation. What those charts also appear to indicate, however, is that the conditions used in preparing the product may affect to some extent both the percentage transmission and the band of wavelength transmitted. The solicitor argues that "transparency is a matter of degree" and complains that because the "less favorable conditions" which produce a less effective product are not specifically disclosed in the specification

one would not know whether a product is "transparent to infrared rays", and therefore would infringe the claims, if the product transmits less infrared than is shown in Fig. 2.

Accepting the solicitor's argument as an attack on the definiteness of the disputed language in the claim before us, we must nevertheless disagree that the claim is rendered indefinite by that language. The record before us establishes that prior art compositions are substantially opaque to infrared rays. Appellants have produced a composition which is substantially transparent to such rays. Such a composition is conceded to be novel. It is true that the figures reproduced in the specification indicate that the degree of transparency varies depending on such factors as the conditions employed in producing the crystal, the thickness of the crystal and the particular wave length of the radiation transmitted. However, in all cases a substantial amount of infrared radiation is transmitted. We do not read appellants' disclosure as suggesting that only certain degrees of transparency to infrared are comprehended within the teaching there given. It follows that when appellants' claim is read in light of that disclosure the limits it purports to define are made sufficiently clear.

The decision of the board is *reversed*.

LANE, Judge, concurring.

I concur in the result reached by the principal opinion. While I do not necessarily disagree with the conclusions about functionality stated therein, I find it unnecessary in this case to make such conclusions.

Taking the language of the third paragraph of section 112 as a definition of the type of "functional" expressions which have long been troublesome in patent law, I find that such expressions are those which recite "a means or step for performing a specified function without the recital of structure, material, or acts in support thereof." An example of what is meant by "a specified function" is found in the Supreme Court's opinion in *General Electric Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 37 USPQ

466 (1938). In that case, offsetting and sagging of filaments in incandescent lamps had long been a problem in the art. The specification there described how to remedy those problems by regulating the size and shape of the grains of material making up the filaments. The claims contained the following expression, which was relied upon for novelty: "grains of such size and contour as to prevent substantial sagging and off-setting during a normal or commercially useful life for such a lamp." Id. at 368, 37 USPQ at 468. The court stated:

"A limited use of terms of effect or result, which accurately define the essential qualities of a product to one skilled in the art, may in some instances be permissible and even desirable, but a characteristic essential to novelty may not be distinguished from the old art solely by its tendency to remedy the problems in the art met by the patent.

Id. at 371, 37 USPQ at 469. The court thus held, under the patent law then in effect, that certain kinds of functional expressions were impermissible at the point of novelty, specifically, those wherein the recited function is merely the solution of a problem in the art.

It cannot be the law that all functional terms are condemned when used to distinguish a claimed invention from the prior art. If this is the law, and it is carried to its logical conclusion, many nouns and adjectives would be condemned as functional, since they define in terms of use or effect. For example, a "door" is something used to close and open a passageway; a "nail" is an object used to hold two pieces of material together; a "black" material is one incapable of reflecting visible light. It is apparent to me that if functionality at the point of novelty is ever per se a ground for rejecting claims, it is not always so.

The kind of function recited in the product claim before us—transparent to infrared rays—is a physical characteristic of the composition of matter claimed. Moreover, no one has suggested a more distinct way of defining that composition, although it has been argued precisely defined. I conclude that the recitation here is not the kind of claim functionality condemned by earlier cases but that it is a kind which is permitted.

It is true that all expressions in claims,

functional or otherwise, must be definite in

order to satisfy the second paragraph of 35

U.S.C. 112. I am in agreement with the

Court of Customs and Patent Appeals

In re Boon

Decided Apr. 1, 1971

PATENTS
1. **Board of Appeals — In general**
(\$19.05)

Evidence — Judicial notice (§36.20)
Board's amplified reasons in support of affirmation of rejection did not constitute new ground of rejection, although reasons rely on additional facts, not previously in record, of which Board took notice, since, even when such facts are included, evidentiary scheme supporting Board's position does not differ in substance than that of examiner; additional facts played the type of minor role which is proper for facts which are judicial noticed.

2. Board of Appeals — In general
(\$19.05)

Evidence — Judicial notice (§36.20)

Ordinarily, citation by Board of new reference, such as dictionary, and reliance thereon to support rejection, is considered as tantamount to assertion of new ground of rejection; this is not the case where such a reference is a standard work, cited only to support a fact judicially noticed and the fact so noticed plays a minor role, serving only to fill in the gaps existing in examiner's evidentiary showing to support rejection; under such circumstances, applicant must be given opportunity to challenge correctness of fact asserted or notorious or repute of reference cited in support of assertion; more than a bald challenge, with nothing more, is needed to warrant reopening of prosecution so that applicant can respond; challenge to judicial notice by Board must contain adequate information or argument so that on its face it creates reasonable doubt regarding circumstances justifying judicial notice.

Particular patents—Air Conveyor

Boon, Air Conveyor System, claims 1, 4, 5, 7, 8, 12, 15, and 16 of application refused; remanded as to claims 2, 3, 6, 9 to 11, 13 and 14.

Appeal from Board of Appeals of the Patent Office.

Application for patent of William Boon, Serial No. 503,272, filed Oct. 23, 1965; Patent Office Group 313. From decision rejecting claims 1 to 16, applicant appeals.

emphasized their essential identity. Whether engendered by Rinehart's arguments, the concentration on the "inherent obviousness" of scaling up led Rinehart and the solicitor into error.

[7] Rinehart erred in contending that the mere insertion into the claims of "commercial scale," without more, would constitute a distinguishing limitation. Though inclusion of the phrase in the claims does no harm, it is clear that mere scaling up of a prior art process capable of being scaled up, if such were the case, would constitute patentability in a claim to an old process so scaled. Moreover, absent evidence to the contrary, nothing in Pengilly or Munro indicates that their processes are not effective on a commercial scale, and Rinehart concedes that commercial operation is implicit in the reference patents.

Rinehart argues here that merely because the appealed claims include a "crucial limitation" to commercial quantities, they were "different claims" and that the board could not therefore have applied the earlier decision to them. We cannot agree. Absent the evidence in Rinehart's affidavit, use of commercial quantities established unobviousness of the references in the processes of the invention as a whole. But Rinehart did more. He submitted substantial evidence touching the basic question of whether his claimed process would have been obvious.

The board erred, as above indicated, in comparing the appealed claims to the earlier claims as though it had been established that the latter did in fact set forth an old or obvious process. In such comparison, the board proceeded as though the earlier claims were a kind of prior art to Rinehart and as though the earlier decision on those claims was a kind of *res judicata*. The differences between the two sets of claims were simply not at issue in this case. The sole question is whether Rinehart's claimed process would have been obvious in view of all the evidence.

The Evidence

The opinion of the board on the appeal involving the parent application included the following:

Appellant alleges the existence of numerous difficulties with the processes of Pengilly and Munro et al. which, he claims, are overcome by combining the features of both processes. However,

process of one should be combined with features of the other to achieve the commercial scale production of which neither is capable requires a holding that the rejection of the board was improper. In *re Avery*, 518 F.2d 1228, 186 USPQ 161 (CCPA 1975). In view of that holding, it is unnecessary to consider Rinehart's allegations of commercial success and satisfaction of long-felt need. The decision of the board is reversed.

The board cited the indication in both Pengilly and Munro that their processes led to rapid reaction time and concluded that improved reaction time would be expected if elements of those processes were combined. The evidence of record establishes, however, that reaction times of both prior processes lengthen as the processes are scaled up. The board held the view that Munro's teaching of higher pressures to increase reaction rate would have provided an obvious solution to the problem. Rinehart encountered in scaling up the process of Pengilly. But Rinehart's problem was not the need for increased reaction rate. It was, as the evidence established, the existence of lumps of frozen polymer. That problem is nowhere alluded to in either Pengilly or Munro, and of course no suggestion of a solution appears in either reference.

Moreover, Pengilly suggested that superatmospheric pressure was productive of certain disadvantages, particularly the need for use of a "large excess" of glycol. The use of superatmospheric pressure in a direct esterification process was referred to in other prior patents of record. With the exception of Munro, however, each such reference cited disadvantages of its use or an inability to find it workable. Munro's disclosure of superatmospheric pressure is rendered an abstraction with respect to appellant's problem by Munro's indication of the same excess glycol requirement when a large scale operation is contemplated. Munro employs a large excess of glycol (a ratio of glycol to acid of 3:1) in his example 5, the only example devoted to larger scale production. Rinehart's large scale production process is limited to a substantially equimolar ratio of glycol to acid. In view of all of the evidence, we cannot agree that Munro would suggest to one skilled in the art the use of superatmospheric pressure to solve the problem of scaling up the process of Pengilly.

Similarly, we find no suggestion in Pengilly or in Munro that Pengilly's preformed ester be employed in Munro's process to overcome the problems encountered in scaling up the process of Munro. Munro, as co-inventor with Lewis in earlier British Patent No. 776,282, was familiar with the use of a preformed polyester in direct esterification, yet neither Munro nor his co-inventor MacLean suggested its use with superatmospheric pressure in the cited reference. We find that the Munro patent contains its own solution to large scale operation, i.e., the use of excess glycol referred to above. That solution is not employed by appellant. [10] Absence of any suggestion in either Pengilly or Munro that features of the

Court of Customs and Patent Appeals

In re Venezia

process 11, 1976
Decided Mar. 11, 1976

No. 75-601
PATENTS
1. **Claims — Indefinite — In general**
(§20.551)

Construction of specification and claims — Defining terms (§§2.45)

Claims that define claimed invention's metes and bounds with reasonable degree of precision and particularity are 35 U.S.C. 112, second paragraph, definite, claim language calling for sleeves "adapted to be fitted" over insulating jacket imparts structural limitation to sleeve rather than merely directing activities to take place in future; structures of components of completed assembly may be defined in terms of interrelationship of components, or attributes they must possess, in completed assembly.

2. **Claims — Indefinite — Mechanical**
(§20.556)

Claims reciting all essential parts of "kit" or parts that may or may not be made into completed assembly are not incomplete for failing to recite completed assembly.

3. **Claims — Indefinite — In general**
(§20.551)

In re Collier, 159 USPQ 266, is inapposite to claims containing language precisely defining present structural attributes of interrelated component parts of "kit" so that later assembly may be effected, rather than describing activities that may or may not occur.

4. **Double patenting — In general** (§§3.1)

Patentability — Subject matter for patent

monopoly — In general (§51.601)

Court of Customs and Patent Appeals decisions on double patenting are not

applicable to interpreting 35 U.S.C. 101 "any manufacture," Section 101 "same invention" type double patenting cases constitute "a patent therefore."

5. Patentability — Subject matter for patent monopoly — In general

Group or "kit" of interrelated parts is 35 U.S.C. 101 "manufacture," and is not excluded from patent protection.

Particular patents — Splicing

Venezia, Method of Splicing High Voltage Shielded Cables and Splice Connector Therefor, rejection of claims 31-36 reversed.

Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of J. William Venezia, Serial No. 31,500, filed Apr. 24, 1970. From decision rejecting claims 31-36, applicant appeals. Reversed.

Donald R. Dunner, and Lane, Aitken, Dunner & Ziems, both of Washington, D.C. (S. Michael Bender, North Tarrytown, N.Y.; Richard A. Craig, New York, N.Y., and Arthur Jacob, Hackensack, N.J., of counsel) for appellant.

Joseph F. Nakamura (T.E. Lynch, of counsel) for Commissioner of Patents and Trademarks.

Before Markey, Chief Judge, and Rich, Baldwin, Lane, and Miller, Associate Judges.

Lane, Judge.

This is an appeal from the decision of the Patent and Trademark Office Board of Appeals (board) affirming the rejections of claims 31 through 36 in application serial No. 31,500, filed April 24, 1970, for "Method of Splicing High Voltage Shielded Cables and Splice Connector Therefor." We reverse.

The Invention

Appellant's invention is a splice connector having interrelated parts adapted to be assembled in the field to provide a splice connection between a pair of high voltage shielded electric cables.

Appellant's application contains claims drawn to the completed connector and to the method of making the splice connection, which have been allowed by the Patent and Trademark Office. On appeal before us are claims drawn to a splice connector "kit" consisting of the parts which are used in

making the splice in their unassembled condition.

Claim 31, with our emphasis, is representative of the claims on appeal:

31. A splice connector kit having component parts *capable of being assembled in the field at the terminus of high voltage shielded electrical cables for providing a splice connection between first and second such cables, said cables each having a conductor surrounded by an insulating jacket within a conductive shield wherein a portion of the conductive shield is removed to expose the insulating jacket and a portion of the insulating jacket is removed to expose the conductor at the terminus of the cable, the kit comprising*

*a pair of sleeves of elastomeric material, each sleeve of said pair *adapted to be fitted* over the insulating jacket of one of said cables, each said sleeve having an external surface and resiliently dilatable internal bore for gripping the insulating jacket to increase the dielectric strength of the creep path along the insulating jacket;*

*electrical contact means *adapted to be applied* to the terminus of each exposed conductor for joining the conductors and making an electrical connection therebetween;*

*a pair of retaining members *adapted to be positioned* respectively between each of said sleeves fitted over the insulating jacket of each said cable and the corresponding terminus of each said cable, said retaining members each having means cooperatively associated therewith for maintaining each said member's position relative to the insulating jacket on each said cable and for precluding axial movement of the sleeve toward the corresponding terminus of each said cable; and*

*a housing, said housing having an internal bore extending therethrough from end to end, said housing including portions adjacent each end thereof defining said internal bore and being resiliently dilatable *whereby said housing may be slidably positioned* over one of said cables and *then slidably repositioned* over said sleeves, said retaining members, and said contact means *when said sleeves, said retaining members and said contact means are assembled* on said cables as hereinabove said, said*

resiliently dilatable portions of said housing respectively gripping the corresponding external surface of each said sleeve in watertight sealing relationship therewith and said housing having a further portion intermediate its ends defining said internal bore and forming a sealed chamber

enclosing at least said contact means and the exposed portions of said cable conductors *when said housing is in its repositioned location.*

The Rejections

Claims 31-36 were rejected under 35 USC 112, second paragraph, as indefinite and incomplete in not defining a completed article of manufacture. The examiner particularly relied in *In re Collier*, 55 CCPA 1280, 397 F.2d 1003, 158 USPQ 266 (1968), as support for this rejection.

Claims 31-36 were additionally rejected under 35 USC 101 because they were drawn to a plurality of separately and discretely listed and defined manufactures instead of a manufacturer.

The Board

The board at first unanimously sustained both of the above rejections. With respect to the section 112 rejection it stated:

In the Collier case, the two elements [see bracketed elements [1] and [2]] of Collier claim 17, infra recited specifically in the claims there under consideration were described in terms of intended uses and capability, and the like. The Court said:

"We agree with the Board, however, that the claim does not positively recite structural relationships of the two elements, identified as (1) and (2) above, in its recitation of what may or may not occur. In this sense it fails to comply with section 112, [second paragraph] 1 [sic] failing distinctly to claim what appellant in his brief insists is his actual invention."

An inspection of the claims here under consideration, see for example claim 31 above, discloses a similar situation. Although the preamble refers to the structure as a "kit," the elements are recited without present cooperation. The language is futuristic and conditional in character, thus, a pair of sleeves - to be fitted - electrical contact means - to be affixed - a pair of retaining numbers (sic, members) - to be positioned - a housing - may be slidably positioned - slideably repositioned - when said sleeves are assembled on said cables - when said housing is in its repositioned location. From the above, it is clear that the language of the claim taken as an example is directed to assembly to take place in the future. No present positive structural relationships are recited.

In affirming the section 101 rejection the board stated:

[Appellant] urges that the elements of his claimed combination are "joined together in a kit of component parts." Such joining as may be recited in the claims, as we have pointed out above in connection with the rejection under 35 USC 112, relates to matters which may take place in the future. No *present* coaction is recited. The presence of the word "kit" in the preamble, we do not think fairly links the elements separately recited in the claims. Appellant has referred to no language in the claims which would support such "joining," and we know of none. [Emphasis in original.]

In a subsequent decision, upon reconsideration, one of the board members disclaimed what he regarded as his invention under section 112. The dissenting member of the board also found that it was not fatal under section 101 that the cooperation of the claimed elements was recited as occurring at a future time.

This posture of the board remained intact following a third opinion rendered after a second request for reconsideration by appellant.

Opinion

Section 112 Rejection

[1] We have reviewed the disputed claims and, in particular, the language criticized by the examiner and the board. We conclude that the claims do define the metes and bounds of the claimed invention with a reasonable degree of precision and particularity, and that they are, therefore, definite as required by the second paragraph of section 112. In *re Conley*, 2d 972, 180 USPQ 454 (CCPA 1974), In re Miller, 58 CCPA 182, 441 F.2d 689, 169 USPQ 597 (1971); In re Borkowski, 57 CCPA 946, 422 F.2d 904, 164 USPQ 642 (1970). As we view these claims, they precisely define a group or "kit" of interrelated parts. These interrelated parts may or may not be later assembled to form a completed connector. But what may or may not happen in the future is *not* a part of the claimed invention. The claimed invention does include present structural limitations on each part, which structural limitations are defined by how the parts are to be interconnected in the final assembly, if assembled. However, this is not to say that there is anything futuristic or conditional in the "kit" of parts itself. For example, paragraph two of claim 31 calls for "a pair of sleeves * * * each sleeve of said pair *adapted to be fitted* over the insulating jacket of one of said cables." Rather than being a mere direction

of activities to take place in the future, this language imparts a structural limitation to the sleeve. Each sleeve is so structured or dimensioned that it can be fitted over the insulating jacket of a cable. A similar situation exists with respect to the "adapted to be affixed" and "adapted to be positioned" limitations in the third and fourth paragraphs of the claim. The last paragraph of claim 31 contains additional language scrutinized by the board, including "may be slideably positioned", "slideably repositioned", "when said sleeves * * are assembled", and "when said housing is in its repositioned location." However, this language also defines present structures or attributes of the part of the "kit" identified as the housing, which limits the structure of the housing to those configurations which allow for the completed connector assembly desired. Again, a present structural configuration for the housing is defined in accordance with how the housing interrelates with the other structures in the completed assembly. We see nothing wrong in defining the structures of the components of the completed connector assembly in terms of the interrelationship of the components, or the attributes they must possess, in the completed assembly. More particularly, we find nothing indefinite in these claims. One skilled in the art would have no difficulty determining whether or not a particular collection of components infringed the collection of interrelated components defined by these claims. *In re Miller*, *supra*.

[2] We also fail to see any basis for rejecting appellant's claims for being incomplete in failing to recite a completed assembly. Appellant's invention is a "kit" of parts which may or may not be made into a completed assembly. Since all of the essential parts of the "kit" are recited in the claims, there is no basis for holding the claims incomplete.

We cannot leave our discussion of the section 112 rejection without discussing *In re Collier*, *supra*, relied on by both the examiner and the board as support for this rejection. In *Collier* we were confronted by the following claim:

17. *For use in a ground connection, [1] a connector member for engaging shield means of a coaxial cable means, said connector member comprising a substantially rectangular piece of metal formed into trough form to define a ferrule-forming member, said ferrule-forming member having a series of perforations disposed therin toward the axis of the ferrule-forming member and defining inwardly*

directed frusto-conical projections having jagged edges defining lances converging toward their tips.

said ferrule-forming member being crimpable onto said shield means with said lances keying into said shield means without penetrating insulation means disposed thereunder,

[2] *and ground wire means for disposition between said ferrule-forming member and said shield means upon the ferrule-forming member being crimped onto the shield means,*

said ground wire means being displaced in a series of bights around respective perforations to effect serpentine form when said ferrule-forming member is crimped onto said shield means. [55 CCPA at 1281-82, 397 F.2d at 1094-05, 158 USPQ at 267. (Emphasis and brackets in original opinion).]

In *Collier* appellant argued that we were to regard the italicized portions of claim 17 about intended uses, capabilities, and structures which would result upon the performance of future acts, as positive structural limitations. However, we found that the claim did not positively recite any structural relationship between the two elements identified as [1] and [2], in its recitation of what may or may not occur. We concluded that the claim failed to comply with section 112, second paragraph, in "failing distinctly to claim what appellant in his brief insists is his actual invention."

[3] There is no issue in this case of whether appellant is claiming what he regards as his invention. Moreover, although the claims before us contain some language which can be labeled "conditional," this language, rather than describing activities which may or may not occur, serves to precisely define present structural attributes of interrelated component parts of the "kit," such that a later assembly of the "kit" of parts may be effected. Thus, we find *In re Collier* inoperative to the claims presently before us.

Section 101 Rejection

35 USC 101 provides in pertinent part:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter * * * may obtain a patent therefor * * *.

Both the examiner and the board construed the language "any * * * machine, manufacture, or composition of matter * * * may obtain a patent therefor" as excluding from its ambit claims drawn to a "kit" of parts, reasoning that a "kit" would be a plurality of separate manufactures, not a single manufacture.

The solicitor in his brief recognizes that the Patent and Trademark Office has in the past issued patents containing similar claims drawn to "kits" of interrelated parts. He argues, however, that double patenting decisions by this court, holding that an inventor may obtain only one patent on a single invention, show that this court has interpreted portions of section 101 in the singular. From this he reasons that the word "manufacture" in section 101 is to be similarly interpreted.

[4] We do not find our decisions on double patenting to be applicable to an interpretation of the words "any manufacture" in section 101. Suffice it to say that the two situations are totally dissimilar. In the section 101 "same invention" type double patenting cases, all we were construing was the phrase "a patent therefor."

No other authority has been cited, either by the board or the solicitor, to support the narrow construction which the Patent and Trademark Office now seeks to impose on the words "any manufacture" in section 101.

[5] We do not believe the words in question are to be so narrowly construed. To hold that the words "any manufacture" exclude from their meaning groups or "kits" of interrelated parts would have the practical effect of not only excluding from patent protection those "kit" inventions which are capable of being claimed as a final assembly (e.g., a splice connector), but also many inventions such as building blocks, construction sets, games, etc., which are incapable of being claimed as a final assembly. We do not believe Congress intended to exclude any invention from patent protection merely because it is a group or "kit" of interrelated parts. We therefore hold that a group or "kit" of interrelated parts is a "manufacture" as that term is used in section 101. Accordingly, the decision of the board is reversed.

Appeal from Examiner of Trademarks.

Application for registration of trademark of The Cyclone Seeder Co., Inc., Serial No. 439,884. From decision refusing registration, applicant appeals. Affirmed.

Before Lefkowitz and Bogorad, Members, and Rice, Acting Member.

An application has been filed by The Cyclone Seeder Co., Inc. to register the mark ".CY CLONE SPEEDY SPREADER", the word "SPREADER" being disclaimed, for broadcast spreader/Seeder.

Registration has been refused under Section 2(d) of the Act of 1946 on the ground that applicant's mark as applied to the goods specified in its application so resembles the previously registered mark "SPEEDY" for corn cribs, power operated agricultural insecticide sprayers, corn shredders and row crop shields for use on cultivators as to be likely to cause confusion or mistake or to deceive.

¹ There are copies of several patents in the record which contain "kit" claims exemplifying this prior practice, including patent No. 3,108,803, claiming basketball goal set kit, patent No. 3,041,778, claiming a puppet kit, patent No. 1,974,838, claiming a toy construction set, and patent No. 3,355,833, also claiming a toy construction set.

² Rep. No. 680,737 issued June 23, 1959, affidavit under Sec. 8 accepted, affidavit under Sec. 15 received.